

## **Remarks**

Claims 1-19 are pending in the application, and each was rejected. Based on the following, reconsideration of the claims is requested.

### **Claim Rejections—35 U.S.C. § 102**

The Examiner rejected claims 1-19 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,654,648 (Nada et al.), which, the Examiner correctly points out, was "previously cited by the Examiner". The Examiner then repeats the previous rejections while failing to do more than summarily dismiss Applicants previously submitted arguments without adequately addressing them.

In the "Response to Arguments" section, the Examiner states: "Applicant's arguments with respect to a prima facie prior art rejection of claims 1-19 as being anticipated by Nada et al. are not seen to be persuasive in that regardless of whether or not separate controllers/CPUs are in control of each of the first and second motors, the main motor control unit inherently performs the claimed validation of engine and motor velocities in a vehicle architecture such that at least one known mathematical relationship exists between the engine velocity and the velocity of the first motor where each is operable to output torque to at least one vehicle wheel." This is the extent of the Examiner's direct response to Applicant's arguments. Aside from its being generally unclear, this response does not address Applicant's specific refutation of the Examiner's position with regard to Nada et al. Rather, the response relies on a function of "the main motor control unit", which the Examiner states is inherent. Such a bald assertion is unsupported by the Nada et al. reference.

In contrast, Applicant's have supplied ample evidence fully supported by specific citations to Nada et al. that the claimed invention is not anticipated. For example, the Examiner states that "the top of the flowchart of figure 10 [ ] teaches determining whether the motor speeds are within a preset/predetermined range, and in the next step therefrom

determining if there is an 'occurrence of abnormality' in step S320." Although not repeated in its entirety, Applicants herein provide some of the reasons previously enumerated as to why the Examiner's interpretation is not correct. For example, step S310 in Figure 10 determines whether "motor speeds are within [a] preset range." The Examiner then states that "the next step therefrom [is] determining if there is an 'occurrence of abnormality' in step S320." This is inaccurate.

Step S320 is completely bypassed if the answer to the question in decision block S310 is "yes". Even if, however, the answer determined in decision block S310 is "no", step S320 does not anticipate any of the claims of the present application, even when taken in combination with any or all of the other steps shown in Figure 10. For example, Nada et al. specifically describes the flowchart shown in Figure 10 in column 20, lines 33-53. It is clear from this description that at decision block S310 two different motor speeds are independently determined to see if they are within a *corresponding* speed range—i.e., each motor speed is *separately* compared to a speed range. There is no mathematical relationship or equation used to combine these speeds and compare this combination to a single predetermined speed range, as specifically recited in independent claims 1 and 10 of the present application. The Examiner has ignored these facts as expressly written in the very reference relied upon for the rejection—i.e., Nada et al.—and has failed to address Applicant's presentation of these facts.

The Examiner further states that in column 8, line 39 - column 9, line 44, "Nada et al. particularly discloses the relationship between the basic operations of a hybrid vehicle and the relative shaft speeds of each of the motors and engine due to the fact that they are all connected through a planetary gearbox whereby the various shaft speeds then hold certain relationships depending on the gear ratio, etc." The Examiner further states that the bottom of column 8 in Nada et al. "gives several equations relating the shaft speeds depending on the number of teeth on the sun and ring gears of the planetary gearbox, by means of which it is determined whether or not there is an abnormality depending on whether the net result for an equation falls within a predetermined range (as taught in the lower portion of column 5)."

Although there are a number of equations presented in column 8 of Nada et al., there is no description of using any of these equations to determine anything about an abnormality either in column 8, or as suggested by the Examiner, in the lower portion of column 5. In fact, the lower portion of column 5 describes the use of multiple controllers to check the results of arithmetic logic operations to verify the validity of the processing of another controller. Nowhere in column 5 is it expressly or inherently described that the arithmetic logic operations are in any way related to the speed and torque equations provided in column 8. Applicants have previously pointed out the lack of support for the Examiner's position in the very passages cited and relied on by the Examiner, yet the Examiner has failed to address this shortcoming, and instead, has parroted the previous rejections without more than relying on a bald assertion of inherency.

The Examiner has failed to establish a *prima facie* case of anticipation for either of the two independent claims—claims 1 and 10. These are the base claims for each of the remaining claims; therefore, there is likewise no case of anticipation for any of the dependent claims. Applicant's arguments, which rely on the Examiner's own cited passages to directly refute the rejections, have not been addressed. Applicants request that the Examiner address these arguments or withdraw the Section 102 rejections.

#### **Claim Rejections—35 U.S.C. § 101**

The Examiner rejected claims 1-19 under 35 U.S.C. § 101, stating that "the claimed invention is directed to non-statutory subject matter." In the "Response to Arguments" section, the Examiner states that Applicant's arguments "are not persuasive because the claimed invention is seen to be nothing more than an embodiment of a well known mathematical relationship which exists between an engine and one or more motors of a hybrid vehicle when all are physically interconnected by mean [sic] of a gearbox or transmission of said vehicle." Applicant's respectfully point out that how the invention is "seen" by the Examiner is not the salient issue; rather, it is whether the invention as claimed meets the requirements of Section 101. Applicants maintain that it does.

These rejections have been repeatedly addressed by Applicant's, who will not include the previous responses in their entirety; however, repeating some of the response to these rejections is instructive. As set forth in WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY OF THE ENGLISH LANGUAGE (Unabridged, 1986) the definition of "validation" includes "an act, process, or instance of validating," and specifically "the process of determining the degree of validity of a measuring device...." As recited in the claims, the velocities of certain torque producing elements, such as an engine and one or more motors, are validated. As discussed throughout the specification, sensor measurements and communications networks can be inaccurate, and therefore, validation may be used to ensure their accuracy—see, e.g., specification at paragraph 0006. A knowledge of whether velocity measurements are accurate—i.e., validating the velocity measurements—is extremely useful, and is, of itself, an end result.

As discussed in detail above, the Examiner summarily dismisses, without support, Applicant's response to the Section 102 rejections in the "Response to Arguments" section. The Examiner then continues in this section, "[t]his is also why a mathematical algorithm type rejection under 35 U.S.C. 101 has been applied to the claims, since such mathematical relationships will then inherently exist in such a vehicle architecture whether or not it is the main purpose to actually validate speeds, where Nada et al. is even particularly directed to detecting abnormalities in a motor vehicle of such a vehicle architecture." Here again, the Examiner has not addressed Applicant's response regarding the utility of knowing that motor and engine speeds are valid. For example, in addition to its relatively mundane role in helping automobile operators stay within the speed limit, validating an engine velocity may be a matter of grave importance to some, for example, airline pilots. Thus, Applicant's submit that knowing that an engine velocity signal is valid—i.e., that it is providing accurate information—is eminently useful.

Applicants believe that claims 1-19 meet all of the requirements of § 101, and are not anticipated by Nada et al.; accordingly, Applicants request allowance of each of the pending claims.

Respectfully submitted,

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